



# New occurrences of *Paepalanthus mollis* Kunth var. *mollis*: extending the distribution of *Paepalanthus* subg. *Xeractis* Körn. (Eriocaulaceae) outside the Espinhaço Range, Minas Gerais, Brazil

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**Abstract.** *Paepalanthus mollis* var. *mollis* is placed in *Paepalanthus* subg. *Xeractis* (Eriocaulaceae) and, until now, it was considered endemic to the *campos rupestres* of the Espinhaço Range in Minas Gerais, Brazil. We report here the new occurrences of this species from the municipalities of Carrancas and Minduri, at the southern part of the mountain complex of Bocaina and Carrancas. These specimens confirm the occurrence of this species and the subgenus outside the Espinhaço Range. These occurrences are also the southernmost sites of geographic distribution of the group.

**Key words.** Carrancas; *campos rupestres*; geographic distribution; Paepalanthoideae; quartzose soils.

*Paepalanthus* Mart. is the largest genus of Eriocaulaceae in South America, being mostly distributed in the Americas with a few species occurring in Africa (GIULIETTI & HENSOLD 1990). In Brazil, there are 345 species and 70 varieties, and 270 species and 49 varieties are reported to Minas Gerais state (FLORA DO BRASIL 2017). *Paepalanthus* is, thus, one of the three largest genera of Brazilian angiosperms (BFG 2015). This relevant taxonomic and morphological diversity is divided into many infrageneric categories (GIULIETTI & HENSOLD 1990).

*Paepalanthus* subg. *Xeractis* Körn. is monophyletic (ECHTERNACHT et al. 2011; TROVÓ et al. 2013) and is easily recognized by the staminate hairy corolla within and by the involucre bracts usually surpassing the capitula (HENSOLD 1988). The group comprises 28 species, many of them narrow endemics sometimes restricted to one or few adjacent mountains (HENSOLD 1988; ANDRINO & COSTA 2013). Until now, the group has been considered endemic to the Espinhaço Range in Minas Gerais, with the species

occurring mainly in the quartzose soils of *campos rupestres* (HENSOLD 1988; ECHTERNACHT et al. 2011; ANDRINO & COSTA 2013).

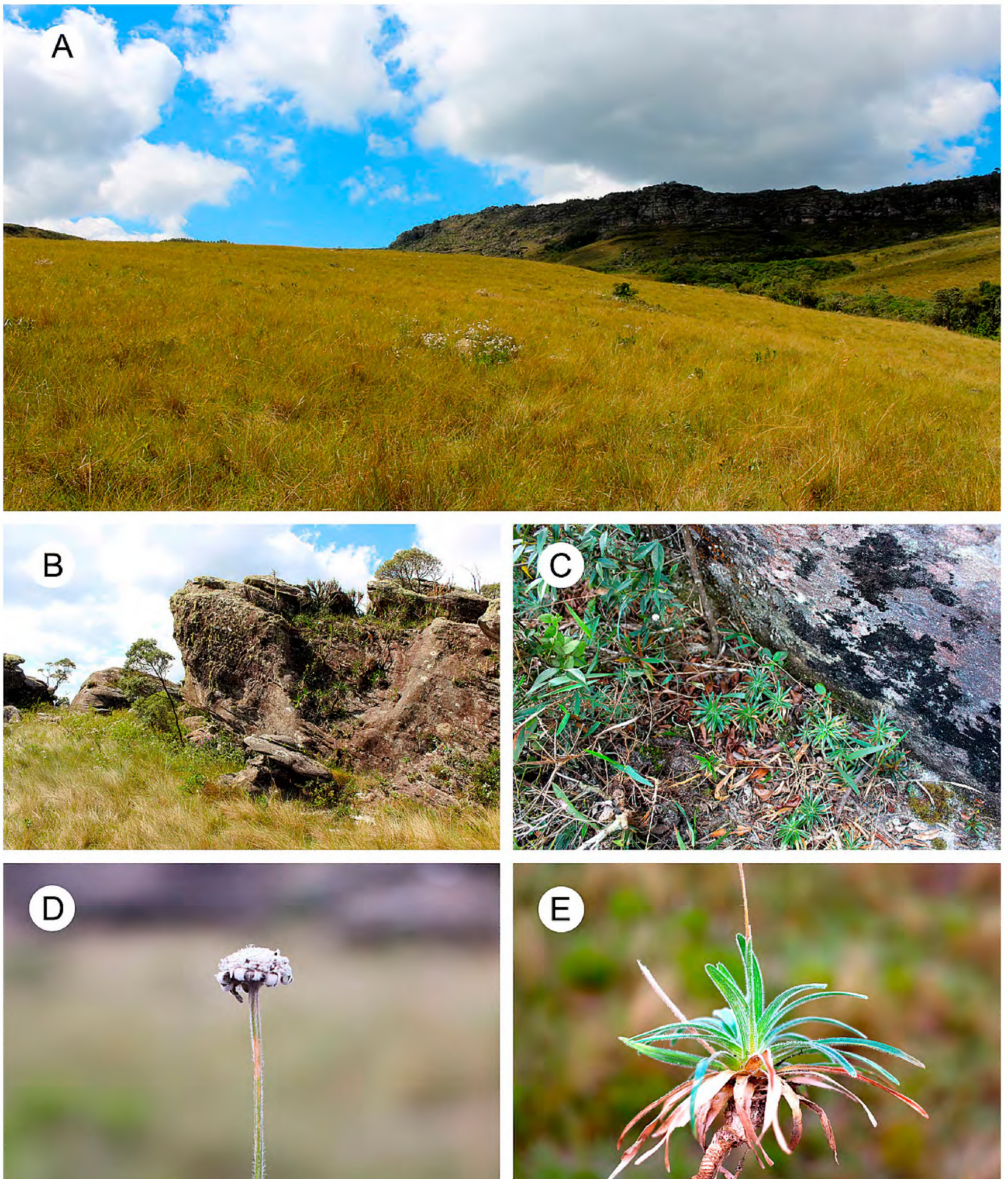
When revising *Paepalanthus* subg. *Xeractis*, HENSOLD (1988) emphasized the uncommon disjunction in the distribution of *Paepalanthus mollis* Kunth. Populations of this species are found in the high slopes of Pico do Itambé (MG), corresponding to *Paepalanthus mollis* var. *itambeenensis* Hensold, and in the *campos rupestres* from Ouro Preto to Serra do Caraça, corresponding to *Paepalanthus mollis* Kunth var. *mollis*. HENSOLD (1988) also cited a questionable occurrence of *P. mollis* var. *mollis* to São João del Rei in the Serra do Lenheiro, based on the specimen *Silveira* 263 (R). However, this occurrence has not yet been confirmed and the subgenus and species distributions were considered restricted to the Espinhaço Range (HENSOLD 1988; ECHTERNACHT et al. 2011).

During the field efforts to survey the flora of the Serra de Carrancas and the Serra da Bocaina between the years 2010 and 2016, many specimens belonging to *Paepalanthus* subg. *Xeractis* were collected. These specimens were sampled and fixed using traditional methods in plant systematics. Mounted specimens are housed at the ESAL herbarium of the Universidade Federal de Lavras.

The specimens were identified using the latest and most comprehensive revision of the group provided by HENSOLD (1988). The clump-forming habit, the small stature, the tiny capitula, and other delicate reproductive features, along with the unique habitat and distribution allowed us to clearly identify the specimens as *Paepalanthus mollis* var. *mollis* (Figure 1).

The newly reported collections of *Paepalanthus mollis* var. *mollis* from the municipalities of Carrancas and Minduri (Figure 2) confirm and extend the distribution of





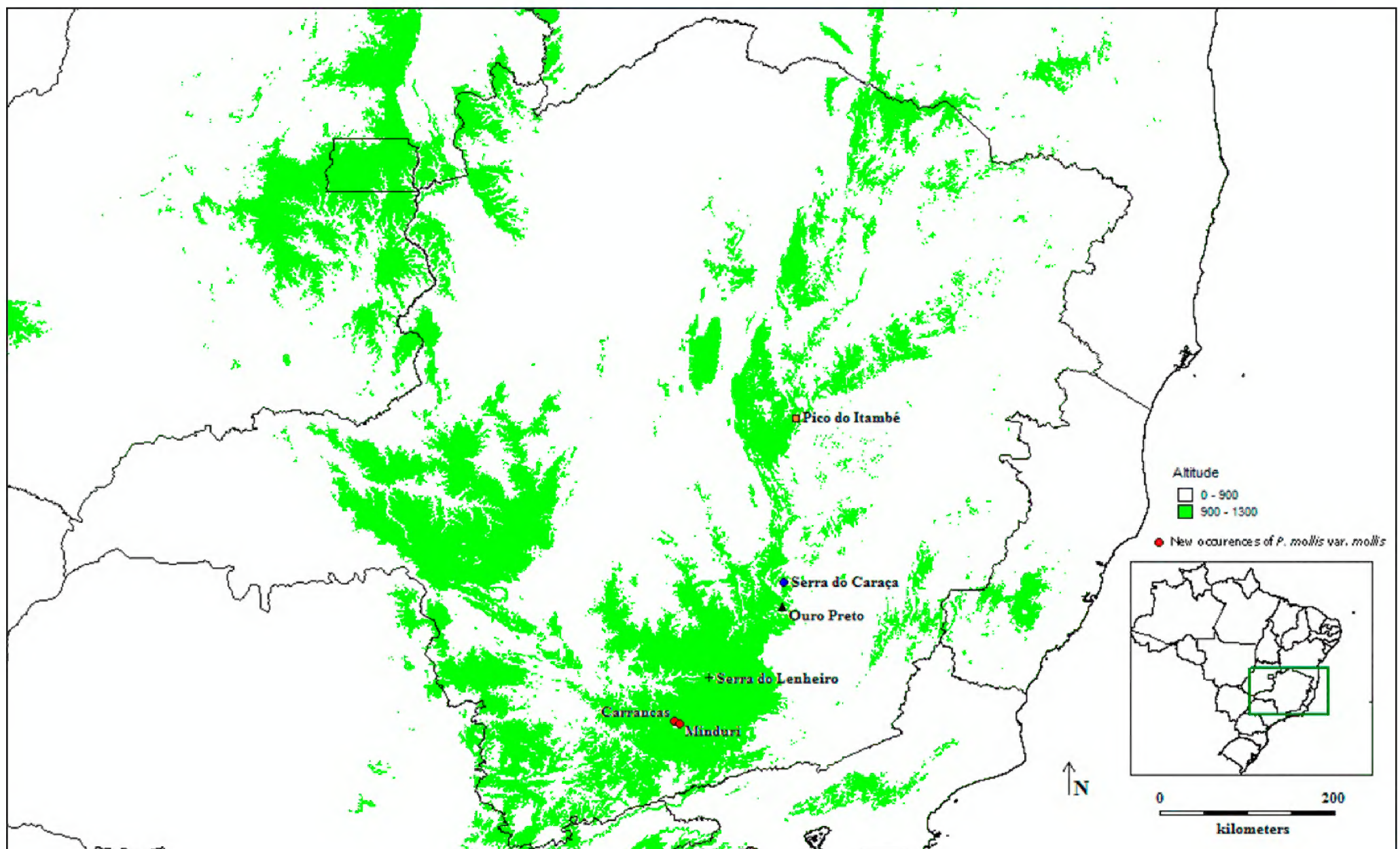
**Figure 1.** Habitat, habit, and details of *Paepalanthus mollis* var. *mollis* (A) overview of the summit of the Serra de Carrancas, (B) habitat detail, (C) population detail, (D) capitulum detail, (E) rosette detail.

*Paepalanthus* subg. *Xeractis* outside the Espinhaço Range, as previously conjectured by HENSOLD (1988). These localities are very close to the Serra do Lenheiro, however no specimens from this exact area have been found until now. These recently discovered populations are distributed in the southern part of the mountain complex of Serra da

Bocaina and Serra de Carrancas, representing the southernmost sites of distribution of the species and the group.

In these more recent collection sites, the individuals of *P. mollis* var. *mollis* form clumps growing over quartzose soils in usually shaded habitats close to large rocks. Although a significant number of specimens were collected, the spe-





**Figure 2.** Occurrence map of the new records for *Paepalanthus mollis* var. *mollis*.

cies is not locally abundant, and seems to be restricted to the mountain summits. It is also relevant that none of these new specimens are protected in conservation units. These populations are, in fact, growing in mountains under intense human interference from tourism, agriculture, and cattle raising.

**Specimens examined.** Brazil. Minas Gerais. Minduri: 21 May 2010, *Mansanares, M.E. et al.* 1568. (ESAL 23879); 14 December 2010, *Mansanares, M.E. et al.* 2069 (ESAL 23881); 7 April 2016, *Mourão, B. et al.* 10 (ESAL 23882); 7 April 2016, *Mourão, B. et al.* 11 (ESAL 23883); 7 April 2016, *Trovó, M.L.O. et al.* 675 (RB). Carrancas: 14 December 2010, *Mansanares, M.E. et al.* 2017 (ESAL 23880).

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